AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A rock drilling machine comprising at least:

a frame;

a percussion element for generating stress pulses;

a shank arranged at the front of the percussion element in the percussion direction, the shank comprising a percussion surface for receiving said stress pulses; and

an axial bearing comprising at least: a first piston and a second piston; between the pistons, an axial first contact surface and an axial second contact surface, said first and second axial contact surfaces being perpendicular to a longitudinal axis of the drilling machine, the contact surfaces being located in the same pressure space; at least one pressure duct for leading pressure fluid from a pressure source to the axial bearing; pressure surfaces in the pistons, on which surfaces the pressure fluid is arranged to act for axial movement of the pistons; and in which the pistons are arranged in the axial bearing to push the shank along a different travel length towards the percussion direction; the force of said pistons, by the action of the pressure fluid towards the percussion direction, being dimensioned such that the percussion surface is adjustable during drilling at the desired axial point for receiving the stress pulses,

wherein the same pressure fluid fed to the axial bearing is arranged to act on said piston contact surfaces and pressure surfaces.

2. (Previously Presented) A rock drilling machine as claimed in claim 1, wherein

behind the second piston is provided a first pressure space that is in contact with the at least one pressure duct for feeding pressure fluid to the axial bearing,

the first contact surface and the second contact surface are located in a second pressure space in front of the first pressure space, and

the pressure fluid fed to the axial bearing is arranged to flow from the first pressure space to the second pressure space.

3. (Previously Presented) A rock drilling machine as claimed in claim 2, wherein

a third pressure space is provided in front of the first contact surface, and

pressure fluid is arranged to flow from the second pressure space to the third pressure space.

4. (Previously Presented) A rock drilling machine as claimed in claim 3, wherein

between the third pressure space and the second pressure space is provided at least one throttle arranged to act on the pressure acting in the second pressure space by throttling the flow of pressure fluid between said second and third pressure spaces.

5. (Previously Presented) A rock drilling machine as claimed in claim 3, wherein

the third pressure space is in contact with at least one second pressure duct, and

at least one element for affecting the pressure acting in the third pressure space is provided in the second pressure duct.

6. (Previously Presented) A rock drilling machine as claimed in claim 1, wherein

the at least one pressure duct is in contact with a percussion pressure duct of the rock drilling machine, and

the first pressure duct comprises at least one throttle for affecting the flow of pressure fluid.

7. (Previously Presented) A rock drilling machine as claimed in claim 1, wherein

the first piston and the second piston are sleeve-like pieces arranged around the percussion element or the shank.

8. (Previously Presented) A rock drilling machine as claimed in claim 7, wherein

the first piston is an elongated sleeve supported by the frame in the area of its first and second ends,

in the section between the first end and the second end, the first piston comprises a shoulder provided on the outer periphery of the sleeve, the shoulder having an axial first contact surface pointing in a direction opposite to the percussion direction,

the second piston is around the first piston, and

the second piston comprises a second contact surface pointing in the percussion direction and arranged in the same pressure space as said axial first contact surface.

9. (Withdrawn) A rock drilling machine as claimed in claim 1 wherein

the axial bearing is located at least mainly behind the percussion element,

the percussion element is a sleeve-like piece, and

the first piston is configured to act on the shank by means of an elongated spacing piece that is at least partly inside the percussion element.

10. (Withdrawn) A rock drilling machine as claimed in claim 1 wherein

the axial bearing is located at least mainly behind the percussion element,

the percussion element is a sleeve-like piece, and

the first piston is arranged partly nestled within the sleeve-like percussion element and arranged to act through the percussion element on the shank.

11. (Withdrawn) A rock drilling machine as claimed in claim 1 wherein

the axial bearing is located at least mainly behind the percussion element,

the percussion element is a sleeve-like piece, and

the shank is provided with a section, which is arranged at least partly nestled within the percussion element and on which the first piston is arranged to act.

12. (Currently Amended) An axial bearing for a percussion rock drilling machine, the axial bearing comprising at least:

a frame;

at least a first piston and a second piston arranged in a space formed in the frame, both comprising

at least one pressure surface;

at least one pressure duct for leading pressure fluid to said pressure surfaces for axial movement of the pistons; and,

between the pistons, axial contact surfaces located in the same pressure space, said first and second axial contact surfaces being perpendicular to a longitudinal axis of the drilling machine, wherein

the same pressure fluid fed to the axial bearing is arranged to act on said piston contact surfaces and pressure surfaces.

13. (Previously Presented) A rock drilling machine comprising at least:

a frame;

a percussion element for generating stress pulses;

a shank arranged at the front of the percussion element in the percussion direction, the shank comprising a percussion surface for receiving said stress pulses; and

an axial bearing comprising at least: a first piston and a second piston; between the pistons, an axial first contact surface and an axial second contact surface, the contact surfaces being located in the same pressure space; at least one pressure duct for leading pressure fluid from a pressure source to the axial bearing; pressure surfaces in the pistons, on which surfaces the pressure fluid is arranged to act for axial movement of the pistons; and in which the pistons are arranged in the axial bearing to push the shank along a different travel length towards the percussion direction; the force of said pistons, by the action of the pressure fluid towards the percussion direction, being dimensioned such that the percussion surface is adjustable during drilling at the desired axial point for receiving the stress pulses,

wherein the same pressure fluid fed to the axial bearing is arranged to act on said piston contact surfaces and pressure surfaces;

behind the second piston is provided a first pressure space that is in contact with the at least one pressure duct for feeding pressure fluid to the axial bearing,

the first contact surface and the second contact surface are located in a second pressure space in front of the first pressure space, and

the pressure fluid fed to the axial bearing is arranged to flow from the first pressure space to the second pressure space.

14. (Currently Amended) An axial bearing for a percussion rock drilling machine, the axial bearing comprising at least:

a frame;

at least a first piston and a second piston arranged in a space formed in the frame, both comprising

at least one pressure surface;

at least one pressure duct for leading pressure fluid to said pressure surfaces for axial movement of the pistons; and,

between the pistons, axial contact surfaces located in the same pressure space, wherein

the same pressure fluid fed to the axial bearing is arranged to act on said piston contact surfaces and pressure surfaces,

behind the second piston is provided a first pressure space that is in contact with the at least one pressure duct for feeding pressure fluid to the axial bearing,

~~the~~ a first contact surface and ~~the~~ a second contact surface are located in a second pressure space in front of the first pressure space, and

the pressure fluid fed to the axial bearing is arranged to flow from the first pressure space to the second pressure space.